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EXAMINER

JUNTIMA, NITTAYA

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/053,023

Applicant(s)

FRASER, ALEXANDER GIBSON

Examiner

Nittaya Juntima

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2002.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-25 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/22/03, 10/2/03.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because:
 - in Fig. 3, items 302, 303 and 305 require text label description, e.g. 303 should be labeled as “packet;”
 - in Figs. 4 and 5, items 302, 303, 305, 401, and 402 require text label description, e.g. 303 should be labeled as “packet;”
 - in Fig. 4, reference sign 403 mentioned in the description at paragraph 00027 on page 10 is missing.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 4, 6, 8, 10, 11, and 22 are objected to because of the following informalities:
 - in claims 4 and 8, ll 2, “is a” should be changed to “are” and “subpacket” should be

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changed to “subpackets;”

- in claims 6, 10, 11, 22, “adapted to” should be changed to make the limitations positive. **An alternative to the suggested change would be a written confirmation stating that the claimed element performs the actual function following “adapted to.”** It has been held that the recitation that an element “adapted to” perform a function is *not* a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10-15 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10, the limitation “A channel storing instructions adapted to be executed by a processor to handle prioritized data in a network, comprising:” in lines 1-2 of the claim is vague and indefinite. It cannot be determined from the claim language as how a channel can store instructions and comprise the steps of sending, interrupting, and resuming as recited in the claim. In the art, a channel is a transmission medium. Therefore, the claim is vague and indefinite. The office is treating the limitation as “A computer readable medium storing instructions to be executed by a processor, the instructions comprising the steps of:.”

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Accordingly, the limitation "The channel" in line 1 of claims 11-15 and 23 are interpreted as "The computer readable medium."

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-5 and 10-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Pauwels (US 2001/0030974 A1).

Regarding claims 1, 10-11, and 24, Pauwels teaches a method for handling prioritized data in a network, including:

sending cells of a first packet (a packet containing cells/slots having a low priority) of data having a first priority (paragraphs 0004 and 0013, see also Figs. 1-3, and paragraphs 0048-0052);

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processing a second packet of data having a priority higher than that of the first packet (a packet containing cells/slots having a higher priority must be classified according to its priority level in order to be put into a respective queue, paragraphs 0004 and 0013, see also Figs. 1-3, and paragraphs 0048-0052);

suspending the transmission of cells of the first packet (paragraphs 0013-0014, see also Figs. 1-3, and paragraphs 0048-0052);

sending cells of the second packet (paragraphs 0013, see also Figs. 1-3, and paragraphs 0048-0052); and

resuming the transmission of cells of the first packet (paragraphs 0013-0014, see also Figs. 1-3, and paragraphs 0048-0052).

Regarding claim 2, Pauwels teaches processing cells of a third packet (e.g. a packet containing cells/slots having the highest priority level) with a priority level higher than that of the first and the second packet; suspending the transmission of cells of the second packet; sending cells of the third packet; and resuming the transmission of cells of the second packet. See paragraphs 0004 and 0013-0014, see also Figs. 1-3, and paragraphs 0048-0052.

Regarding claims 3, 12, and 17, Pauwels further teaches that at least one of the first and second packets is a datagram/packet-switched subpackets (data packets, paragraphs 0004-0005, and 0055-0056).

Regarding claims 4, 13, and 20, Pauwels further teaches that the cells of at least one of the first and second packets are circuit-switched subpackets (packet contains cells, paragraph 0004-0005, and packets with explicit first and last slot indicators, paragraph 0055, and 0058).

Regarding claims 5, Pauwels teaches that at least one of the first and second packets is an IP packet (a data packet used in a data network such as LAN or WAN must be IP packet, paragraphs 0002, 0004, 0055, and 0056) and the cells of at least one of the first and second packets are ATM subpackets (a large data packet containing asynchronous cells, paragraphs 0004-0005 and 0055-0058).

Regarding claims 14 and 18, Pauwels further teaches that at least one of the first and second packets are circuit-switched packets (packets with explicit first and last slot indicators, paragraphs 0004-0005, 0055, and 0058).

Regarding claims 15 and 19, Pauwels further teaches that at least one of the first and second cells are packet-switched subpackets/datagrams (packet contains cells, paragraph 0004-0005, and data packets, paragraphs 0055-0056).

Claim 16 is a system claim corresponding to method claim 1, and is therefore, rejection under the same reason set forth in the rejection of claim 1 with the addition of a first switch (a switch, paragraph 0013) and a second switch with the limitations as recited in the claim (a receiver switch with queues 30-60, Fig. 4, paragraphs 0053-0054).

Regarding claims 21-23 and 25, Pauwels teaches determining the priority of at least one of the first packet and the second packet (since each queue has an associated predetermined priority classification and the traffic, e.g. packet(s) having cells, are put in their respective queue according to their priority levels, paragraphs 0013 and 0048, determining the priority of at least one of the first packet and the second packet must be included).

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pauwels (US 2001/0030974 A1).

Claim 6 is an apparatus claim corresponding to method claim 1, and is therefore, rejection under the same reason set forth in the rejection of claim 1 with the addition of a processor (a processor, paragraph 0013), a memory (a number of memory devices collectively constitutes a memory, paragraph 0013, i.e. the physical memory, paragraph 0006), and instructions to be executed by the processor (instructions must be inherently included, paragraph 0013). Although Pauwels fails to explicitly teach that the memory store instructions to be executed by the processor, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Pauwels to store the instructions in the memory so that they can be accessed for execution, maintenance, and modification locally within the apparatus.

Claims 7-9 are apparatus claims corresponding to method claims 3-5, respectively, and therefore are rejected under the same reason set forth in the rejection of claims 3-5, respectively.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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- US 6,826, 189, disclosing virtual connection queues, packet queues with priority, and a scheduler in an ATM switch (Figs. 7-9 and col. 7, ll 9-col. 9, ll 31.
- US 5, 555, 244, disclosing preemption method for micro cell transmission carrying TDM and packet data (col. 8, ll 5-43, col. 9, ll 42-col. 10, ll 1, col. 11, ll 16-34, col. 17, ll 4-col. 18, ll 31.
- US 5,999,534, disclosing method for scheduling cells for use in priority scheduler (Fig. 2).
- US 6,345,051 B1, disclosing priority scheme where higher priority cells of a PDU can pre-empt transmission of a lower priority PDU at the ATM cell level (Fig. 1 and col. 5, ll 37-67).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima
October 14, 2005
NS


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PRIMARY EXAMINER
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